TIMELINEZ BEGINS DESK-TOP PUBLISHING EXPERIMENTS

by
Norm Lehfeldt

With this issue 'TIMELINEZ' has a new editor and begins the transition to desk-top publishing!

This page has been created entirely with the use of 'FRONT PAGE' -- the desk-top publishing program from GAP Software for the QL. Actually, that statement may be a bit misleading. Much of the graphics work necessary to reproduce our masthead in this new medium was done with 'Artworx' on my T/S 2068, converted to RLE format and transmitted by modem to my QL for inclusion in the 'FRONT PAGE' page files. From this statement you can conclude that 'FRONT PAGE' has some serious limitations.

From the viewpoint of an editor its most serious limitation is that it does not permit the loading of existing text files into the page files -- every word on a 'FRONT PAGE' page must be entered and edited letter by letter. This makes it impossible, for example, for text prepared by contributors to be transmitted to an editor electronically and imported directly into the page files.

Graphics are another matter, however. As you can see on this page, graphic material in QL screen format can easily be incorporated anywhere on a page and may be shifted around in row and column increments. The Japanese scene created by Bill Strick on the 2068 already existed as a QL screen file on one of my discs and it was a simple matter to incorporate it on the page.

'FRONT PAGE' contains a number of troublesome bugs: After loading a file it often seems to put the cursor in draw mode so that a portion of your composition can be destroyed before you

Original Art by Bill Strick
on a Timex 2068 w/Tech-Draw

realize it. I find that when saving a file from RAM disc to floppy the program returns with the existing RAM file corrupted so that it must be reloaded to continue work. Inexplicably, the program has no facility for deleting files from microdrive or floppy so that you must keep thinking up new file names to back up your work at each stage and then go back later and clean up unwanted files from the storage medium. As the manual admits, error trapping in the program is minimal -- an incorrect file name, for example, generates a run-time error message on the screen and usually requires re-running the program from scratch.

Epson-compatible printers are supported for printing the results of your efforts and other printer options are supposed to be on the way. Printing for 'TIMELINEZ' is being handled by a utility created by Don Thompson for the Olivetti PR2300 ink-jet printer.

An extremely positive aspect of 'FRONT PAGE' is the author's largely realized intention to make it workable on unexpanded QL's using only the microdrives for storage, while still allowing enough flexibility for those with more sophisticated machines to take full advantage of larger memories and disc drives.

Despite all the cavils, I think 'FRONT PAGE' is an interesting and useful program -- more and more pages of this newletter will be prepared with it in the months to come. And if Peter Chambers, the author of it, makes good on promises of upgrades it stands to become an indispensable utility.

'FRONT PAGE' is about $30.00 from most QL dealers.

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Inside This Issue:

Bob Orrfelt digs into the Hong Kong-made T/S 1000 clone.

Tim Swenson explores orbital mechanics with a short program for the QL.

A new 2068 program helps Walt Gaby get started on next year's income taxes.

BOOK REVIEWS:

INTRODUCTION TO 2068 MACHINE CODE
by Dr. Lloyd Dreger 213+ pages.

Subtitled "A Self Study Manual For The Beginning Assembly Language Student
That Bridges The Gap Between Advanced Basic and Machine Code". Really it
is much more than that. Topics include computer numbers and Z80 code in
general to TS2068 internal machine code in particular. There is also a
chapter on peripherals.

Besides self study this manual makes a good reference works. Most addresses
and code are in decimal rather than hexadecimal. Hexadecimal is the "natural"
numbering system for machine code. This book is highly recommended.   RSO

THE TIMEX/SINCLAIR 2068 ROM MANUSCRIPT
by Dr. Lloyd Dreger 248+ pages.

Subtitled "Machine Code and Assembly Language (with notes and comments) and
Cross References to the Sinclair Spectrum". This manual is a commented ROM
disassembly. Addresses are in decimal but Z80 code is in hexadecimal.

Alas, the serious student still needs Dr. Logan's Spectrum ROM Disassembly
for the program description material. The 9 page Spectrum/Timex cross
references do give both decimal and hexadecimal addresses which is excellence.
RSO

PRODUCT REVIEW:

PC 8300

Not quite a TS1000 clone! Much like the TS1000 (it will run most TS1000
programs) but with a keyboard like the TS1500. Added features: joystick
port, tv port, monitor port, and an power on LED. Also auto line numbering,
sound, and some game graphics are built in. Needs 16K RAMPAK (2K is built
in). TS2040 printer works ok.

How it works: ZX81/TS1000 tape programs are automatically detected and
converted to PC8300 format. Most PC8300 keywords have to be typed in
at which time they are converted to tokens. The tokens are not necessarily
the same as the TS1000. So PC8300 programs will not work on your TS1000.

This is a fun computer. Each key has its own BEEP tone. The manual is
written in Hong Kong English:

   "So many sound! you may think. "May I play my computer more
   quietly?" The answer is sure. You can simply type

           NOBEEP

   then ENTER. Now the computer is in NO BEEP mode, and no any sound will
   be responded when you press the keys.

From: American Design Components,
      62 Joseph St.,
      Moonachie, NJ 07074
      (800) 524 0809
      $29.95+$5.99 s/h

Here's a frivolous little program that's designed to reveal your lucky number by means of a Magic Square. "Magic Birth Day Square" is fun, but don't bet your life savings on it.

```
10 REM .MAGIC BIRTH DAY SQUARE
   .LOAD "SQUARE"

15 REM .BY GERTIE ANDERSSON

 90 GO SUB 1000
100 PRINT AT 21,0;"WHAT'S YOUR
NAME?": INPUT N$
110 CLS
120 PRINT AT 19,0;"PLEASE GIVE
ME YOUR BIRTHDATE;"
130 PRINT AT 21,0;"MONTH": INPU
T MO
135 IF MO>12 THEN GO TO 130
140 PRINT AT 21,0;"DAY ": INPU
T DA
145 IF DA>31 THEN GO TO 140
150 PRINT AT 21,0;"YEAR; LAST 2
DIGITS": INPUT A
160 CLS
190 PRINT TAB 5;"MAGIC BIRTH DA
Y SQUARE"
200 FOR X=1 TO 11 STEP 3
210 FOR Y=8 TO 22
220 PRINT AT X,Y;"_";
230 NEXT Y: NEXT X
235 OVER 1
240 FOR Y=8 TO 23 STEP 5
250 FOR X=2 TO 10
260 PRINT AT X,Y;"|"
270 NEXT X: NEXT Y
280 OVER 0
300 LET B=MO+A: LET C=MO+B
310 LET D=DA+A: LET E=DA+D: LET
F=DA+B
320 LET G=DA+F: LET H=DA+C: LET
I=DA+H
350 PRINT AT 3,9;H;AT 3,14;A;AT
3,19;G
360 PRINT AT 6,9;E;AT 6,14;F;AT
6,19;C
370 PRINT AT 9,9;B;AT 9,14;I;AT
9,19;D
400 LET T=H+A+G: LET TT=T
410 LET T$=STR$ T
420 IF T<10 THEN GO TO 500
430 IF T>9 AND T<100 THEN GO TO
470
440 LET T=VAL T$(1)+VAL T$(2)+V
AL T$(3)
450 IF T<10 THEN GO TO 500
460 LET T$=STR$ T
470 LET T=VAL T$(1)+VAL T$(2)
475 IF T<10 THEN GO TO 500
480 LET T$=STR$ T
495 LET T=VAL T$(1)+VAL T$(2)
500 PRINT ,"CHECK IT OUT, ";N$
,"."
505 PRINT "EACH ROW, COLUMN AND
MAIN       DIAGONAL ADDS UP TO
";TT;"."
510 PRINT "CONCENTRATE ON THAT
FIGURE WHILEI GO INTO A DEEP TRA
NCE."
520 PRINT "   MUMBO JUMBO, HEXE
S, SIGNS;      MAGIC NUMBER, CAS
.T OUT NINES!"
530 PRINT AT 21,0;"AHA! I HAVE
IT! PLEASE ENTER.": INPUT Z$
540 CLS
550 LET M$="WORKED LIKE A CHARM
"
560 LET P=LEN M$+LEN N$
570 PRINT AT 3,INT (((32-P)/2)-
1);M$;N$;"!"
590 PRINT ,TAB 5;"YOUR LUCKY NU
MBER IS"
```

```
600 IF T=1 THEN LET L$="ONE"
605 IF T=2 THEN LET L$="TWO"
610 IF T=3 THEN LET L$="THREE"
615 IF T=4 THEN LET L$="FOUR"
620 IF T=5 THEN LET L$="FIVE"
625 IF T=6 THEN LET L$="SIX"
630 IF T=7 THEN LET L$="SEVEN"
635 IF T=8 THEN LET L$="EIGHT"
640 IF T=9 THEN LET L$="NINE"
650 PRINT AT 10,13;L$
660 PRINT AT 21,0;"ANOTHER READ
ING? YES(Y) OR NO(N)": INPUT Z$
670 IF Z$<>"Y" THEN GO TO 2000
680 CLS
690 GO TO 100
1000 REM ..UDG
1010 LET Z=74: FOR X=0 TO 7
1020 READ Y: POKE USR CHR$ Z+X,Y
: NEXT X
1030 DATA 128,128,128,128,128,12
8,128,128
1100 REM ..INTRO
1110 PRINT TAB 5;"MAGIC BIRTH DA
Y SQUARE"
1120 PRINT ,"WANT TO KNOW YOUR L
UCKY NUMBER? LET MY MAGIC SQUARE
FIND IT    FOR YOU."
1130 PRINT "  GIVE ME YOUR BIRTH
DATE AND,   USING MY OCCULT POWE
RS, I WILL   DETERMINE EXACTLY WH
ICH NUMBER"
1140 PRINT "IS THE ONE THAT CAN
INFLUENCE    EVERY FACET OF YOUR
LIFE. USE"
1150 PRINT "IT WISELY AND YOU WI
LL BE RICHLYREWARDED."
1160 RETURN
2000 CLS
2010 PRINT AT 8,7;"HAVE A MAGIC
DAY!"
2020 PRINT AT 21,25;"GA 87"
```

MAGIC BIRTH DAY SQUARE

44	15	67
65	42	19
17	69	40

CHECK IT OUT, GERTIE.
EACH ROW, COLUMN AND MAIN
DIAGONAL ADDS UP TO 126.
CONCENTRATE ON THAT FIGURE WHILE
I GO INTO A DEEP TRANCE.

   MUMBO JUMBO, HEXES, SIGNS;
   MAGIC NUMBER, CAST OUT NINES!

AHA! I HAVE IT! PLEASE ENTER.

WORKED LIKE A CHARM, GERTIE!

YOUR LUCKY NUMBER IS

NINE

The New Tax Law and You (As if you really wanted to know.)

By

Walt Gaby

For those who wish to know how the Federal Legislation will impact income taxes, there is now a program for the T/S 2068 that will show you: "The New Tax Law And You" by Herb Bowers.

After loading the program, enter certain key figures from your 1986 Income Tax Return. The program generates a series of six tables which provide you with an item-by-item comparison of tax information for 1986, 1987 and 1988.

A Worked Example

As an example of how this program works, assume a two-income family with one dependent which is filing a joint return on a 1040 form.

Assume further that the family has a $42,000 income comprised as follows: Wages which total $40,000 (of which the spouse earns $18,000), Interest of $500 and other income of $1500 (but with a $2000 adjustment for the working couple deduction). And finally, assume the following regarding deductions: Medical (gross), $3500; State Taxes, $1000; Real Estate Taxes, $1200; Sales Taxes, $500; Mortgage Interest, $2000; Contributions, $200; and Union Dues, $100.

The first impact identified is that the working-couple deduction is discontinued after 1986. The next impact shows major change in the threshold for medical/dental expenses. Other impacts: The Sales Taxes and Union Dues will no longer be deductible.

Under "Summary of Items" (Step 4), therefore, total itemized deductions have been reduced by $1,750. In 1987, however, the $4,750 of deductions are less than the standard deduction of $5,000. In each case, of course, the higher figure is subtracted from the adjusted gross income to calculate taxable income.

As a result of the combined changes in (1) deduction rules,

(2) Exemption Allowances and (3) Tax Rates, the tax liabilities for our example household have happily fallen from $5,5633 in 1986 to $5,074 in 1987 and $4,855 in 1988. While their marginal tax rate has remained constant, their effective rate has fallen about two percentage points from 13.41% to 11.55%.

Income Tax Comparison

INCOME ITEMS, Step 1:	1986	1987	1988
Wages, salaries, tips, etc.	40000	40000	40000
Interest	500	500	500
Dividends	N/A	N/A	N/A
Capital Gain	N/A	N/A	N/A
Unemployment Compensation	N/A	N/A	N/A
Rents, Partnerships, etc.	N/A	N/A	N/A
ALL other income	1500	1500	1500
Gross Income	42000	42000	42000

* No $100/$200 dividend exclusion after 1986.
* Long term taxable gain fully taxable after 1986.
* Unemployment Compensation fully taxable after 1986.
* Passive Losses cannot be applied to other income after 1986.
* If you have any income from scholarships, grants, etc. they may become taxable after 1986.

ADJUSTMENTS, Step 2:	1986	1987	1988
Moving Expenses	N/A	N/A	N/A
Employee Business Expenses	N/A	N/A	N/A
IRA Deduction	N/A	N/A	N/A
Keogh Retirement & SEP deductions	N/A	N/A	N/A
Penalty for Early Withdrawal	N/A	N/A	N/A
Alimony Paid	N/A	N/A	N/A
Deduction for working couple	2000	-0-	-0-
Total Adjustments	2000	-0-	-0-

* Moving Expenses become Itemized Deductions after 1986 with 20% reduction for meals. Not subject to 2% floor.
* Unreimbursed Business Expense becomes itemized deduction, with 20% reduction for meals and entertainment.
* IRA contributions are subject to limitations if pension plan.
* Keogh and SEPs are limited to $7000 after 1986.
* The deduction for married couple when both work is discontinued after 1986.

ITEMIZED DEDUCTIONS, Step 3:	1986	1987	1988
Total Medical and Dental Expenses	3500	3500	3500
Less:5% agi 1986;7.5% after 1986	<2000>	<3150>	<3150>
Allowed medical and dental	1500	350	350
Taxes. (No Sales Tax after 1986)	2700	2200	2200
Interest (Consumer Reduced >1986)	2000	2000	2000
Charitable Contributions	200	200	200
Casualty and Theft Losses	N/A	N/A	N/A
Limited Miscellaneous	N/A	N/A	N/A
Unlimited Miscellaneous	100	-0-	-0-
Total Itemized Deductions	6500	4750	4750

SUMMARY OF ITEMS, Step 4:	1986	1987	1988
Gross Income	42000	42000	42000
Adjustments to Income	2000	N/A	N/A
Adjusted Gross Income	40000	42000	42000
Total Itemized Deductions	6500	4750	4750
1986 Zero Bracket Amount	<3670>	N/A	N/A
Excess Itemized Deductions	2830	4750	4750
1987 & 1988 Standard Deduction	N/A	3760	5000
Exemptions	3240	5700	5850

TAXABLE CALCULATION, Step 5:	1986	1987	1988
Gross Income	42000	42000	42000
Adjustments to Income	2000	-0-	-0-
Adjusted Gross Income	40000	42000	42000
----------	----------	----------	----------
Total Itemized Deductions	6500	4750	4750
1986 Zero Bracket Amount	<3670>	-0-	-0-
----------	----------	----------	----------
Excess Itemized Deductions	2830	4750	-0-
1987 & 1988 Standard Deduction	-0-	-0-	5000
Exemptions	3240	5700	5850
Taxable Income	33930	31550	31150

INCOME TAX LIABILITY

1986 Tax Liability before Additional Taxes or Credits: $5633

1987 Tax Liability before Additional Taxes or Credits: $5074

1988 Tax Liability before Additional Taxes or Credits: $4855

```
FINAL PROJECTION SUMMARY

1986 Gross Income    = $42000
1986 Taxable Income  = $33930
1986 TAX LIABILITY   = $5633
Marginal Tax Rate 28%
Effective Tax Rate 13.41%

1987 Gross Income    = $42000
1987 Taxable Income  = $31550
1987 TAX LIABILITY   = $5074
Marginal Tax Rate 28%
Effective Tax Rate 12.08%

1988 Gross Income    = $42000
1988 Taxable Income  = $31150
1988 TAX LIABILITY   = $4855
Marginal Tax Rate 28%
Effective Tax Rate 11.55%
------------------------------
     This has been A B D A SOFTWARE PRODUCTION
------------------------------
```

I have used this program for my own purposes and find that it calculates 1986 numbers to the exact dollar. However, the program assumes constant income and deduction figures for future years. Since I know those figures will be substantially different in 1987, I simply entered my 1987 estimates in a subsequent round of analysis to identify 1987 tax numbers.
Price of the program is $7.00 from:

Herb Bowers, Sr.
2588 Woodshire Circle
Chesapeake, VA 23323

A great program at a reasonable price.

TRY THIS ON YOUR 2068
by Geo. Mockridge

```
  10>CIRCLE 206,164,7: CIRCLE 20
6,164,3
  11 CIRCLE 206,124,7: CIRCLE 20
6,124,3
  12 CIRCLE 206,88,7: CIRCLE 206
,88,3
  20 RESTORE
  30 FOR i=1 TO 11: READ x1,y1,x
2,y2
  35 GO SUB 500
  40 NEXT i: STOP
 400 DATA 50,92,206,172,66,84,20
6,156,74,64,206,138,66,44,206,11
6,50,12,206,96,66,0,206,80,66,0,
50,12,50,12,50,92,66,44,66,84,66
,84,74,64,74,84,74,48
 500 PLOT x1,y1: DRAW (x2-x1),(y
2-y1): RETURN
```
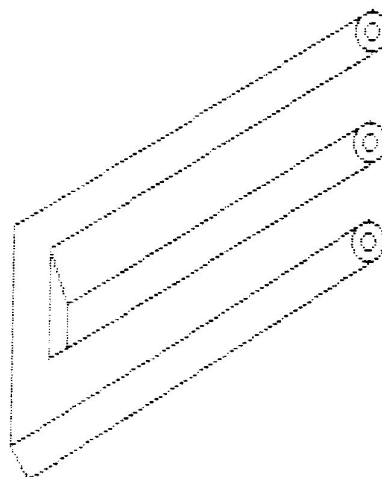
Orbit Simulator
By Tim Swenson

Orbit Simulator Listing

This is a interesting program that I picked up from my friend Doug Fries. He wrote it to run on a C-128. Using his listing and some notes on the program, I converted the program to run on the QL.

The program starts out by drawing a planet at the center of the screen. A dot will appear above the planet. This is the orbiter. The orbiter will orbit around the planet. By using the joystick to put a thrust on the orbiter, one can drop the orbiter in to a tighter orbit, or an eliptical orbit.

The joystick is used by pushing in one of the four main directions. If you push up, the orbiter will get a thrust to push it up.

This program is fun to try different things out on the orbiter. The results can be surprising.

By the way, you might be interested in knowing that the program ran faster on the QL than it did on the C-128.

```
100 WINDOW #1,512,256,0,0 :
PAPER 0
110 DIM trail(50,2)
120 CLS
130 SCALE 1000,0,0
140 INK 4 : FILL 1 : CIRCLE
500,500,30
150 FILL 0 : INK 7
160 LET xpos=500 : LET ypos=750
170 LET xmov=9 : LET ymov=0
180 LET top=0 : LET last=1
190 REPeat loop
200     LET top=top+1
210     IF top>50 THEN LET top=1
220     POINT xpos,ypos
230     LET trail(top,1)=xpos :
LET trail(top,2)=ypos
240     LET dxpos=xpos-500
250     LET dypos=ypos-500
260     LET
distance=(dxpos^2+dypos^2)^.5
270     LET
gravity=20000/distance^2
280     LET
xmov=xmov-gravity*dxpos/distance
290     LET
ymov=ymov-gravity*dypos/distance
300     LET key = KEYROW(1)
310     IF key<>0 THEN joystick
320     LET xpos=xpos+xmov
330     LET ypos=ypos+ymov
340     IF top+1=last OR
top-49=last THEN
350        INK 0 : POINT
trail(last,1),trail(last,2) :
INK 7
360        LET last=last+1
370        IF last>50 THEN LET
last=1
380     END IF
390 END REPeat loop
400 DEFine PROCedure joystick
410 BEEP 100,1
420     IF key=4 OR key=6 OR
key=20 THEN LET ymov=ymov+1
430     IF key=128 OR key=144 OR
key=130 THEN LET ymov=ymov-1
440     IF key=2 OR key=6 OR
key=130 THEN LET xmov=xmov-1
450     IF key=16 OR key=144 OR
key=20 THEN LET xmov=xmov+1
460 END DEFine joystick
```

MAY 17, SUNDAY, 1:00 P.M.

  Peninsula Users Group

Tim Swenson:

Cellular Automata on the QL

Norm Lehfeldt:

Desk-top publishing with

'FRONT PAGE'

  XXXXXXXXXXXXXXXXXXXXXX

MAY 26, TUESDAY, 7:30 P.M.

  East Bay Z80 User Group

CALL RUSS ENGLISH, 465-3116
TO VERFIY MEETING PLACE!

  XXXXXXXXXXXXXXXXXXXXXX

MAY 27, WEDNESDAY, 7:00P.M.

  Silicon Valley Sinclair
  Technology Users Group

NEW MEETING PLACE:

    Star By The Sea
    Catholic Church

  1385 Michigan Avenue
  (between Essex and Archer)
  Alviso

237 to San Jose-Alviso Road
(N. First St.), NW on S.J.-
Alviso, right on Michigan
to the church.

Theme:

  T/S Public Domain Software

  Steve Nichols:

    T/S 1000 Programs

  XXXXXXXXXXXXXXXXXXXXXX

EVERY SATURDAY, 9:00 A.M.

Timex/Sinclair Interest
Group of The Computer
Workshop meets at Stanford.

    Jordan Hall (Bldg. 380)
    (on the quadrangle)
    Room 300C (downstairs)

E B Z U G   EAST BAY Z80 USER GROUP
          3128 KING STREET
          BERKELEY, CALIFORNIA 94703
               (Woody McPheeter's)

CONTACT: RUSS ENGLISH (415) 465-3116

MEETINGS: FOURTH THURSDAY OF EACH MONTH, 7:30 P.M.
           WEST BRANCH LIBRARY
           1125 UNIVERSITY AVENUE, BERKELEY

MAKE CHECKS FOR DUES PAYABLE TO "WOODY McPHEETERS".

P U G   PENINSULA USER GROUP
        311 MICHELLE LANE
        DALY CITY, CALIFORNIA 94015
        (415) 878-1773

PRESIDENT: GEORGE MOCKRIDGE

MEETINGS: THIRD SUNDAY OF EACH MONTH, 1:00 P.M.
           PENINSULA HOSPITAL
           1783 EL CAMINO REAL, BURLINGAME

MAIL DUES TO: PAT MORRISSEY
              2000 CRYSTAL SPRINGS ROAD
              BUILDING 21, APT. 22
              SAN BRUNO, CALIFORNIA 94066

**S V S T U G   SILICON VALLEY SINCLAIR TECHNOLOGY
                        USER GROUP**

        6675 CLIFFORD DRIVE
        CUPERTINO, CALIFORNIA 95014
        (408) 253-3175

PRESIDENT: RITA CARR, (408) 738-2888, X-4579

MEETINGS: LAST TUESDAY OF EACH MONTH, 7:00 P.M.
            (FOR LOCATION OF MEETINGS SEE ACCOMPANYING
            SVSTUG NEWS.)

MAKE CHECK FOR DUES PAYABLE TO "SINKLINK".

A Special Message From The (New) Editor . . .

Well, here it is -- another late issue of our newsletter. Not a very auspicious beginning for a new editorial regime.

Because I am afraid that I may have bitten off a little more than I can chew in accepting this job, I would like to encourage you to follow these guidelines when submitting material to TIMELINEZ. I hope that by simplifying the process at my end I will be able to get the newsletter to you on time each month.

Text Files

Text for publication will be easiest to handle if it is in Quill, MSCRIPT or Tasword files on cassettes or microdrive cartridges. If you put your name and address on the media they will be returned to you right after use. If you submit printed text, print-outs the width of those produced by the 2040 printer are easiest to paste up. If you are adept at it, I will be happy to accept submissions by modem when I am available.

Graphics Files

Graphics files will be easiest to use if they are sent on cassettes or cartridges as RLE files or QL or 2068 SCREEN$'s. This will allow me to use them easily in 'FRONT PAGE', which I want to do as much as possible. I really encourage you to create and submit for publication as much computer art (including location maps, etc.) as you possibly can.

Obviously, contributions in any form will be gratefully received.

Also please take a moment to look over the club listings in this issue and send in any corrections necessary.

TIMELINEZ will continue to be as good as we all make it together.

Norm Lehfeldt

757 Guerrero Street
San Francisco, CA 94110

(415) 285-0643

TIMELINEZ

P.O. Box 1312
Pacifica, CA 94044
U.S.A.

First Class Mail